

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-27-56
Relating to Certification of New Heavy-Duty Motor Vehicle Engines

MACK TRUCKS, INC.

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-3;

IT IS ORDERED AND RESOLVED: That the following Mack Trucks, Inc. 1989 model-year diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 8,500 pounds:

<u>Engine Family</u>	<u>Displacement Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
KMT0728FAA9 (Family 14)	11,11.9 (672,728)	(Direct Injection) (Turbocharger) (Charge Air Cooler) (Smoke Puff Limiter)

Engine models and codes are listed on attachments.

The following are the certification emission standards for this engine family:

<u>Hydrocarbons gm/bhp-hr</u>	<u>Carbon Monoxide gm/bhp-hr</u>	<u>Nitrogen Oxides gm/bhp-hr</u>	<u>Particulates gm/bhp-hr</u>
1.3	15.5	6.0	0.60

The following are the certification emission values for this engine family, except that compliance with the carbon monoxide emission standard has been demonstrated pursuant to the Code of Federal Regulations, Title 40, Part 85, Subpart A, Section 86.088-23(c)(2)(1):

<u>Engine Family</u>	<u>Hydrocarbons gm/bhp-hr</u>	<u>Nitrogen Oxides gm/bhp-hr</u>	<u>Particulates gm/bhp-hr</u>
KMT0728FAA9 (Family 14)	0.5	4.6	0.53

BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Code of Regulations, Section 2036).

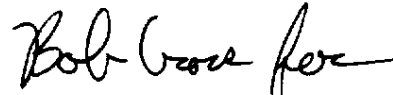
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Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this 13th day of December, 1988.

A handwritten signature in cursive script, appearing to read "Bob Gross for".

K. D. Drachand, Chief
Mobile Source Division

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1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

Manufacturer Mack Trucks, Inc. Engine Family KMT0728FAA9 (14)
 Liter (CID) (672 & 728 CID) Eng. Type In-Line 6 Cyl
 Emission Control Sys. and (Special Features) (DI, TC, CAC, SPL)
Four-Valve Head

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)
EC6-350	Bosch 313GC5173-P4 313GC5173-P16 (Road Speed Governor)	Bosch 114GC318-P8	350 @ 1800	199.3	1277 @ 1250	239.9
EM6-275L	Bosch 313GC5173-P22 313GC5173-P24 (Road Speed Governor)	Bosch 114GC318-P8	275 @ 1750	162.1	1275 @ 1020	248.0
EC S-270	Bosch 313GC5173-P30	Bosch 114GC321	270@2100	142.2	960 @ 1260	177.0
E7-400	Bosch 313GC5179-P18 313GC5179-P20 (Road Speed Governor)	Bosch 114GC318-P8	400 @ 1800	229.9	1460 @ 1250	268.6

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Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)
E7-350	Bosch 313GC5179-P1 313GC5179-P4 (Road Speed Governor)	Bosch 114GC318-P8	350 @ 1800	195.3	1277 @ 1250	227.5
EM7-300L	Bosch 313GC5179-P6 133GC5179-P8 (Road Speed Governor)	Bosch 114GC318-P8	300 @ 1750	174.8	1425 @ 1020	262.9
EM7-250L	Bosch 313GC5179-P14 313GC5179-P16 (Road Speed Governor)	Bosch 114GC318-P8	250 @ 1750	145.2	1190 @ 1020	216.0
EMC6-300L	Bosch 313GC5181-P2	Bosch 114GC318-P8	300 @ 1750	186.6	1425 @ 1020	274.4
EMC6-250L	Bosch 313GC5173-P32	Bosch 114GC318-P8	250 @ 1750	148.1	1160 @ 1020	226.9

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